

What is claimed is:

1. An electroluminescence light emitting device comprising:

an electroluminescence light-emitting layer containing electroluminescence light-emitting elements therein;

an electrode section comprising first and second electrodes which are disposed on one surface side of the electroluminescence light-emitting layer and have a predetermined pattern in which the first and second electrodes are electrically separated from each other with a spacing region;

a top coating layer, which is disposed on the other surface side of the electroluminescence light-emitting layer, and on a front surface of which an electrically conductive material is attachable to form an alternating current electric field in the electroluminescence light-emitting layer by an alternating current power supply voltage applied between the first and second electrodes, the top coating layer comprising a compound additive containing dielectric; and

a waterproof layer which is provided between the electrode section and the electroluminescence light-emitting layer.

2. The electroluminescence light emitting device

as claimed in claim 1, wherein the electroluminescence light-emitting layer contains a compound additive containing dielectric.

3. The electroluminescence light emitting device as claimed in claim 1, wherein the electroluminescence light emitting layer is formed with using ink which contains the electroluminescence light-emitting elements and a fluorocarbon resin by a silkscreen printing.

4. The electroluminescence light emitting device as claimed in claim 1, wherein a light-reflecting layer is provided between the electrode section and the electroluminescence light-emitting layer.

5. The electroluminescence light emitting device as claimed in claim 4, wherein the light-reflecting layer is formed with using ink which contains a barium titanate and a fluorocarbon resin by the silkscreen printing.

6. The electroluminescence light emitting device as claimed in claim 1, wherein the compound additive containing the dielectric is a silicon-based compound.

7. The electroluminescence light emitting device as claimed in claim 6, wherein the silicon-based compound

is a silicon-based coupling agent.

8. The electroluminescence light emitting device as claimed in claim 7, wherein the silicon-based coupling agent is added 0.05-5.0 % by weight of a solution which is made by diluting a material for forming a layer with a solvent.

9. The electroluminescence light emitting device as claimed in claim 1, wherein the waterproof layer is formed with using polyester-based ink by the silkscreen printing.

10. The electroluminescence light emitting device as claimed in claim 1, wherein the top coating layer is formed with using ink which contains an urethane-based ink and a curing agent by the silkscreen printing.

11. The electroluminescence light emitting device as claimed in claim 10, wherein the urethane-based ink and the curing agent are mixed in a 7 : 8 ratio.

12. The electroluminescence light emitting device as claimed in claim 10, wherein the urethane-based ink and the curing agent are mixed in a 4 : 3 ratio.

13. A method for manufacturing an electroluminescence light emitting device comprising: an electroluminescence light-emitting layer containing electroluminescence light-emitting elements therein; an electrode section comprising first and second electrodes which are disposed on one surface side of the electroluminescence light-emitting layer and have a predetermined pattern in which the first and second electrodes are electrically separated from each other with a spacing region; a top coating layer, which is disposed on the other surface side of the electroluminescence light-emitting layer, and on a front surface of which an electrically conductive material is attachable to form an alternating current electric field in the electroluminescence light-emitting layer by an alternating current power supply voltage applied between the first and second electrodes; and a waterproof layer which is provided between the electrode section and the electroluminescence light-emitting layer, the method comprising the steps of:

adding a compound additive containing dielectric in the top coating layer; and

forming the waterproof layer with using polyester-based ink by the silkscreen printing.

14. The method for manufacturing the

electroluminescence light emitting device as claimed in claim 13, further comprising a step of adding a compound additive containing dielectric in the electroluminescence light-emitting layer.

15. The method for manufacturing the electroluminescence light emitting device as claimed in claim 13, further comprising a step of forming the electroluminescence light emitting layer with using ink which contains the electroluminescence light-emitting elements and a fluorocarbon resin by the silkscreen printing.

16. The method for manufacturing the electroluminescence light emitting device as claimed in claim 13, further comprising steps of forming a light-reflecting layer with using ink which contains a barium titanate and a fluorocarbon resin by the silkscreen printing, and providing the light-reflecting layer under the electroluminescence light-emitting layer.

17. The method for manufacturing the electroluminescence light emitting device as claimed in claim 13, further comprising a step of forming the top coating layer with using ink which contains an urethane-based ink and a curing agent by the silkscreen printing.

18. The method for manufacturing the electroluminescence light emitting device as claimed in claim 17, further comprising a step of adding a hardening accelerator for forming the top coating layer.